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ABSTRACT

Findings of a study that evaluated the Spencerport, New York, "More Effective Schools/Teaching Project" and examined the project's validation process are presented in this paper. The program model was based on change at the individual school level, administrator/staff collegiality, comprehensive interventions based on school culture, and central office support. Outcomes included an increase in the number of effective school correlates in each district school and increased academic performance. Four types of claims recognized by the Program Effectiveness Panel of the U.S. Department of Education include academic achievement and improvements in teachers' and students' attitudes and behaviors and in instructional practices and procedures. A review of Spencerport's initial validation application to the Department of Education suggests the possibility of a fifth claim--that of improvements in the organizational culture, policies, and long-term outcomes. The Spencerport application was approved based on its case for claims. One figure of an effective schools project flowchart and six tables are included. (45 references) (LMI)

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THE MORE EFFECTIVE SCHOOLS/TEACHING PROJECT:

STALKING THE FIFTH CLAIM?

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INTRODUCTION

The purpose of this study was to describe the Spencerport, New York, "More Effective Schools/Teaching Project and to identify issues involved in validating the project through the Program Effectiveness Panel of the U.S. Department of Education. While descriptions of Effective Schools interventions initiated by school districts are available, (Miles, 1989; Taylor, 1991) to date, no Panel validations of the Effective Schools development processes described by Holcomb (1991) that have been initiated in school districts have been successfully completed. The issues surrounding the attempt at validation through the Program Effectiveness Panel are described below and include evaluation methodology, views of systems change, and what constitutes evidence of change.

Effective Schools Research.

Recent research on school effectiveness (Lezotte & Levine, 1990) substantiates one kind of link (correlation) between the correlates of effective schools and student achievement. Case studies of effective schools (Taylor, 1990) have shown how patterns of implementing school improvement strategies which centered upon the correlates are at least coincident with gains in overall achievement as well as more equitable achievement for children of the poor.

During the late 1970's and the 1980's there was some agreement upon five major characteristics of effective schools among researchers engaged in fieldwork (Levine and Lezotte, 1990). These included: 1) a safe and orderly school climate, 2) high expectations for student success, 3) strong administrative leadership, 4) the frequent monitoring of student progress and, 5) an emphasis on student acquisition of basic skills from a clearly defined instructional program (Edmonds, 1978). Research by Gauthier (1982, 1985); Shoemaker (1982) and Villanova (1984) included 6) time to learn and 7) positive home-school relations. The latter two characteristics were studied by Weiss (1984) and later included in several case studies (Taylor, 1990).

In later there has been less agreement that the correlates cited above are the only important characteristics of effective schools. For example, additional possible correlates are reported in Levine and Lezotte (1990):

* A student sense of efficacy (Brookover and Schneider, 1975; Stringfield and Teddlie, 1987,1988);
* Multicultural instruction and sensitivity (Stedman, 1987);
* Personal development of students (Comer, 1988);
* Rigorous and equitable student promotions, policies

and practices (Eubanks and Levine, 1983); and,
* Student responsibility for learning (Mortimore, 1988).

An additional issue which has arisen in the research is that correlates seem to be themselves correlated. This fact has complicated research efforts to identify a model of school effectiveness which might be considered potentially causal to achievement outcomes (Frederick and Clauset, 1985).

Research on Implementing Effective Schools.

In their book of case studies of Experimental Schools, Herriot and Gross (1979) concluded that:

> "..educational change efforts at the local, state, and federal levels need to be conceptualized in dynamic terms and as consisting of interrelated stages, each of which has its own special activities and problems."
>
> p. 378.

With respect to case studies of effective schools implementation, (Taylor, 1990) the process of implementing improvements in the characteristics of project schools had two cycles, Development and Implementation/Annual (Sudlow, 1990). Sudlow's cycles were in turn made up of activities. The first cycle began with pre-planning and ended with inservice on how to develop a plan, about fourteen months later. The second cycle began with data analysis and ended with an annual evaluation report (see Figure 1). Pre-planning centered on district leadership awareness and commitment. The planning level consisted of awareness, leadership development, a master plan and the formation of teams. The implementation cycle included: annual assessment of the correlates and outcomes, disaggregating outcome data, yearly building level plan updates, plan approval by faculty and building level plan implementation, followed by evaluation, reporting and a return to data analysis, new draft plans, etc.

Sudlow found that while it was important to emphasize the primacy of the individual building in school improvement, there may be a critical role for the district office to play in the process of sustaining positive change (Sudlow, 1990; Lezotte & Taylor, 1990). Spencerport, New York, the site for the study had previously been validated as a successful school district by the New York state validation process. The present study was an attempt to extend the validation to the Program Effectiveness Panel of the U.S. Department of Education.

The Spencerport Project: More Effective Schools/Teaching

Background, Development and Structure

The Spencerport Central School District is a typical middle class suburban school system with 3,500 students enrolled in grades K - 12. It is located approximately ten miles west of Rochester, New York. The chief employer is Eastman Kodak Company whose factories are located outside of the district. It is a low wealth district; it consistently ranks sixteenth or seventeenth out of the eighteen districts in Monroe County in both wealth and expenditures per pupil; it consistently ranks about twenty-five percent below the state average for wealth per pupil and for expenditures per pupil.

In the early 1980's the Spencerport Central School System was, by all traditional criteria, a good school system. Approximately 27% of its students went on to four year colleges and approximately 41% of its students received Regents Diplomas. Of those students who took Regents Examinations 89% passed them as compared to the State average of 78%. Student performance on other state mandated examinations as well as the Metropolitan Achievement Tests was equally good. Reasonable numbers of students received Regents Scholarships, National Merit Letters of Commendation, or were National Merit Semi-finalists or Finalists. The athletic program was good with several teams, especially wrestling, swimming and soccer consistently winning county and League championships. Likewise, reasonable numbers of students won individual honors at the county, League and State levels. The music program was one of the better ones in a county heavily influenced by the standards of the Eastman School of Music. The staff in Spencerport, quite rightly, was proud of its accomplishments as educators and of the accomplishments of the students entrusted to its care.

During the early 1980's some administrators in Spencerport became interested in the literature reporting studies which showed that there were common characteristics in good schools where all of the students were learning (e.g., Edmonds, 1979, Brookover and Lezotte, 1979). After considerable investigation, Ronald Edmonds and Lawrence Lezotte from the Institute of Research on Teaching at Michigan State University were asked to work with Spencerport to help it inaugurate a school improvement program based upon this new research. They agreed. As Lezotte wrote:

> "We agreed to work with . . . [Spencerport] because of all the things that Spencerport Central was not. We accepted the invitation because your school district was small and, by some standards, rural. Up until that point, effective schools had been seen primarily as a large school and urban school program. Second, Spencerport was not heavily impacted with economically poor or minority students. This factor was important to us because most of the early effective schools projects were conducted in inner city poor and minority school districts. The ability to show that the effective schools framework could serve as a generalized framework

> was most significant to us. Third, Spencerport Central was not a low achieving district by most standards. Again, we were most interested in learning whether the framework could guide school improvement in a higher achieving district.Finally, we went to Spencerport because this represented a chance for us to participate in a district-wide, K-12 program. Up to this point, most of the earlier programs had focused on elementary schools and usually only on a few schools in a larger district." (Lezotte, 1987).

Development.

A brief chronology follows:

Edmonds and Lezotte first came to Spencerport on January 26, 1983 and between then and February 22 conducted awareness sessions with the Board of Education, the Administrative Council, the Curriculum Council and the Teacher's Union Executive Committee. A multi-role district leadership team was formed. The purpose of the team was to develop a district plan for school improvement based upon the effective schools research. Edmonds and Lezotte provided staff development for two days to the team on effective schools research, change research and implications of the change research. The team then formed subcommittees to develop a draft master plan for school improvement based on the effective schools research, to determine what student outcomes would be measured, what instruments would be used to measure the student outcomes and to select an effective schools correlates needs assessment instrument. When the subcommittees completed their work the District Leadership Team reconvened to hear and discuss their reports and to approve the final plan. This plan was submitted to the Superintendent and the Board of Education for approval. The Board unanimously approved it on June 22, 1983 (Sudlow, 1983). While the approval process was occurring building level multi-role school improvement committees (called Building Planning Teams) were formed. The purpose of the Building Planning Teams was to annually develop plans for school improvement which result in improved and more equitable achievement of all students.

The District Leadership Team had selected the Connecticut Interview as the correlates needs assessment instrument to be used in the District. Because the Interview was written for elementary schools, Edmonds and Lezotte helped the team to revise it so that it would be appropriate for the junior and the senior high school levels. (At that time there were no secondary correlates needs assessment instruments anywhere in the nation.) Also, the Team decided, with the approval of Edmonds and Lezotte, to use the instrument as a survey questionnaire rather than as a one-on-one interview form. Appropriate modifications were made in the instructions to reflect this change. The Connecticut Interview was administered to all teachers and administrators on May 20, 1983.

It has been re-administered in May of each subsequent year in order to ascertain what progress has occurred in having the correlates describe the climate of each school and in order to provide data for Building Planning Teams as they develop plans for the forthcoming year.

In June and early July of 1983 socio-economic data was gathered on each student in the district and disaggregated analyses of student achievement were compiled. This data is updated annually in time for Building Planning Teams to analyze it as they develop their plans for the forthcoming year.

During June and July, Ronald Edmonds and Lawrence Lezotte were charged with the task of reviewing the Connecticut School Interview data and preparing a written profile of each school. Sadly, Ronald Edmonds unexpectedly passed away on July 15, 1983. (The last thing he wrote prior to his death was the profile for the Cosgrove Junior High School.) Lawrence Lezotte wrote the remaining profiles.

Using the disaggregated data and the profiles prepared by Edmonds and Lezotte each school's Building Planning Team prepared a draft plan for the forthcoming year which was submitted to and approved by each faculty. After the faculties approved them they were sent to the Superintendent for final review and approval. The last building plan was approved on October 17, 1983.

During the summer of 1984 a five day workshop was provided for the school improvement committees by Patrick Proctor from the Connecticut State Education Department on how to analyze disaggregated student outcome data, how to analyze correlate needs assessment survey data and how to develop a school improvement plan based on this data. By fifth day each Building Planning Team had developed two or three plans for school improvement to recommend to their faculties. The processes learned during this workshop have been used annually since to develop new, or revised, building plans for school improvement.

In addition to the annual school improvement cycle described above, an annual evaluation report for the project is prepared and submitted as a public document to the Board of Education in October of each year (e.g., Sudlow, 1986). Copies are also sent to each school for their review and discussion.

Structure.

The model exemplifies the underlying guidelines associated with successful and sustained change models as identified by Levine and Lezotte (1990) in their recent review of the research:

* A focus on change at the individual school level,
* The involvement of administrators and staff at the school site "in a collaborative, collegial process designed specifically to empower the change process,"
* An emphasis upon broad-based comprehensive interventions which originate from fundamental reaffirmation of beliefs that define the culture of the school,
* Central office support.

The processes of developing the Master Plan for the More Effective Schools/Teaching Project and of the annual cycle for school improvement based on the effective schools research described above are summarized in the flowchart on the following page.

Goals

The Project's goals for each school in the district were:

Primary Goal

A. Ninety-five or greater percent of all the students at each grade level shall demonstrate minimum academic mastery. [Students who achieve minimum academic mastery have been prepared so that they will be predictably successful in the next grade in either their own school district or any other school district throughout the nation. Minimum academic mastery is measured by performance on standardized tests at a standard of the fortieth percentile.] Children in Learning Disabilities classes shall be included in building analyses. The effect of the inclusion of the children on the total population shall be carefully monitored and analyzed.

B. There shall be no significant difference in the proportion of youth demonstrating minimum academic mastery as a function of socio-economic class.

C. The above two conditions shall have been obtained for a minimum of three consecutive years.

Annual School Improvement Goal

Should a building not be effective according to the criteria of the Primary Goal . . . then we recommend that the following definition of school improvement be used until the building attains effectiveness.

A. There shall be an annual increase in the proportion of students who demonstrate minimum academic mastery, and
B. There shall be an annual decrease in the proportion of youth demonstrating minimum academic mastery as a function of socio-economic class.

Concomitant [Excellence] Goal

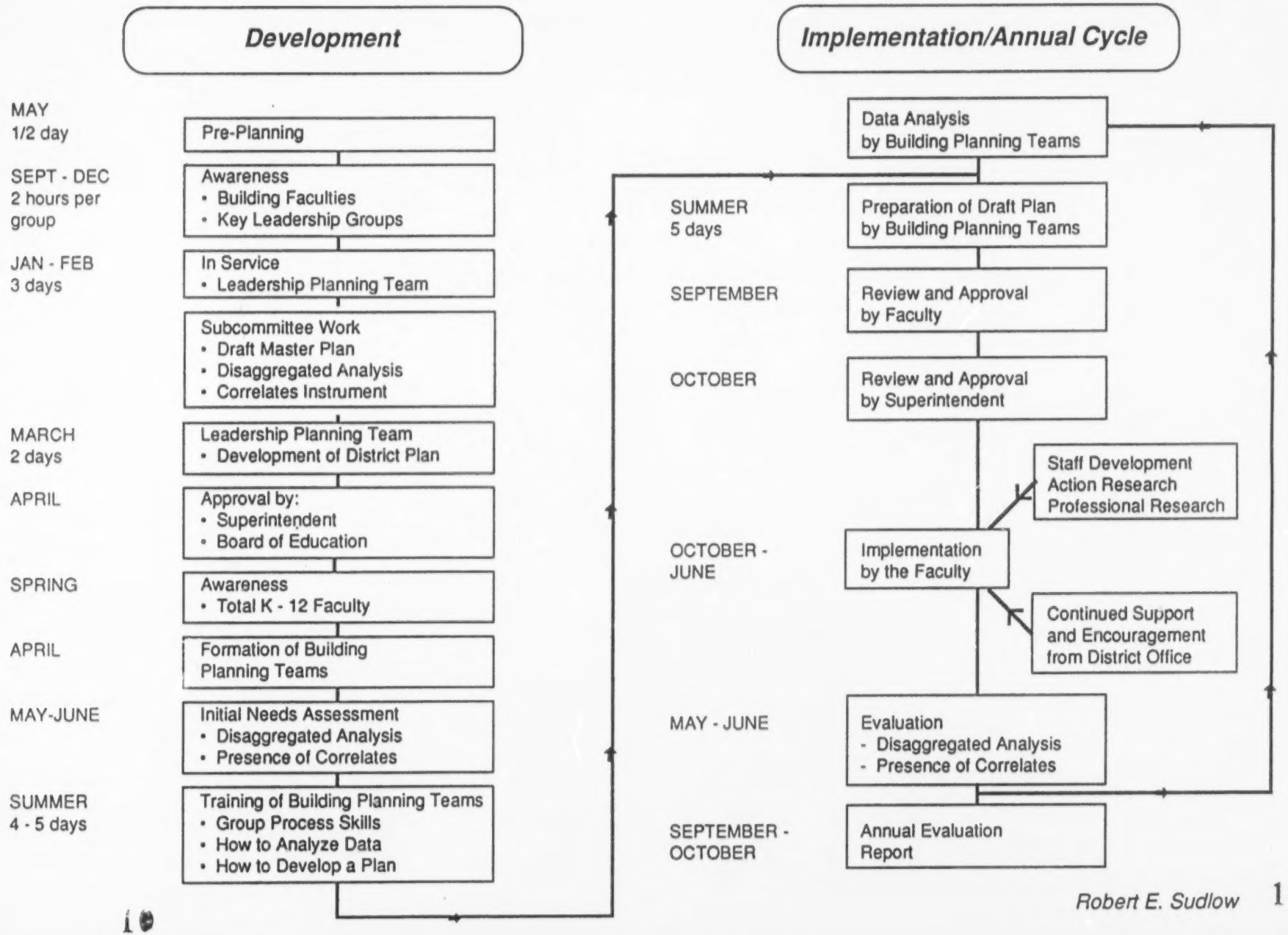
Evaluations of ongoing school improvement projects show that as overall achievement rises, outstanding individual achievement also rises. Therefore we recommend that the district monitor various indicators to see if the number of students with outstanding achievement rises. . . .

1. There shall be an annual evaluation of the percentage of students demonstrating superior academic mastery as demonstrated either by scoring in stanines seven, eight and nine on the Stanford Achievement Test or by scoring at or above 90% on a Regents exam.

2. For those subject in which a significant percentage of the students take a Regents exam:
   a. A score of 65% or better
   b. An annual increase in the percentage of students taking the exam.

The Primary Goal was a rigorous goal and unlikely to be attained in one year. The Annual School Improvement Goal was important because it provided an interim goal which buildings could meet annually on their journey to effectiveness. The Concomitant, or Excellence, Goal was important because this Goal made the More Effective Schools/Teaching Project a project for all students, not just students at risk. The achievement of students who normally do well was linked with the achievement of those who normally have trouble learning. As the achievement of both of these groups was expected to rise, so too, was the achievement of the students in the middle expected to rise. These goals are more fully discussed elsewhere (Sudlow, 1985).

EFFECTIVE SCHOOLS PROJECT FLOWCHART



Findings

1. The correlates which describe an effective school over time came to describe each school in the district.

Table 1 - Number of Correlates in Place in the district's schools. (a)

1983	1984	1985	1986	1987	1988	1989
3	10	18	24	30	34	34

(a) A correlate is considered to be present when two-thirds of the faculty indicates on a needs assessment instrument that the characteristics which comprise the correlate are present in the building. The maximum number of correlates possible = 35 (7 correlates per building times 5 schools).

When Spencerport began its project, the faculty in three schools indicated that none of the correlates of an effective school described their school. In the fourth school, the faculty said that one correlate was present. In the fifth school, the faculty said that two correlates were present. By 1988 all of the correlates were present in four schools and six of the seven correlates were present in the fifth school.

Eighty percent (80.0%) of the total faculty was present from 1982-83 through 1988-89. The low was 64% for the Junior High School and the high was 94% for an elementary school. The correlates which came into place first were Safe and Orderly Environment and Clear School Mission. The correlates which came into place last were Instructional Leadership and Clear School Mission. Generally, the correlates came into place sooner in the elementary schools than in the secondary schools. This is attributed to the larger size and different organizational structure of the secondary schools. We conclude that there was a significant improvement in the practices, procedures and characteristics of each school, as defined by the correlates (see Appendix A).

Corroborative evidence regarding the presence of the correlates and the changes in the operating procedures of the schools and of the District came from a qualitative case design study regarding the implementation of the Project with special emphasis on teachers' reactions to the project (Wooley, 1990). She found: The list of district changes is long. Some examples included: (a) changes in roles (i.e.,responsibilities of teachers on building planning committees, as teacher leaders, and in new position such as the staff development trainer), (b) new goals and policies (i.e., the focus on the mission of teaching and learning, measurable instructional and correlate goals, written policies for discipline, attendance, and homework, and (c) changes in processes and procedures (i.e., the annual change cycle, [see page 4] an annual project evaluation report, an annual analysis of student test data and the results of the effective schools survey, the committee decision-making process, and staff development programs). With each of these examples, this district has changed the ways things are done and how people behave.

Flexibility was provided by decentralizing the leadership of the project's implementation to each school's building planning team of principal and teachers. These findings indicate that each school has proceeded differently and at different rates. Some examples of this variety include (a) the many ways building planning team members were selected, (b) differences in the number and purposes of sub-committees in each school, and (c) the work of each school on different correlates and tasks. This successful mutual adaptation (Sarason, 1982) may in part explain teachers' positive reactions (Wooley, 1990, pp. 260-261).

2. As the correlates came into place there was a continued, and significant increase, in the proportion of students scoring at or above the fortieth percentile (i.e. minimum academic mastery) throughout the life of the project. There was a continued, and significant, increase in the proportion of students scoring in stanines 7-8-9 (i.e., the Concomitant or Excellence Goal of the project).

Table 2 - Changes in Student Achievement 1982-83 through 1988-89

		Grades 1 - 8 Percent >39th		Percent > Stanine 6	
		READING COMPREHEN	TOTAL MATH	READING COMPREHEN	TOTAL MATH
1982-83	%	77.0%	84.3%	37.6%	45.7%
	N	2,117	2,120	2,117	2,118
1983-84	%	83.4%	87.0%	37.2%	49.6%
	N	2.023	2,021	2,023	2,021
	z	7.33	3.51	-.38	3.55
	LS	.0001	.001	NS	.001
1984-85	%	82.8%	88.6%	39.8%	52.6%
	N	1,874	1,872	1,874	1,872
	z	6.48	5.62	2.02	6.18
	LS	.0001	.0001	.05	.0001
1985-86	%	85.2%	90.1%	41.3%	56.0%
	N	1,876	1,874	1,876	1,874
	z	9.41	7.79	3.39	9.25
	LS	.0001	.0001	.0001	.0001
1986-87	%	85.4%	91.5%	42.9%	60.7%
	N	1,866	1,860	1,866	1,860
	z	9.65	9.91	4.83	13.56
	LS	.0001	.0001	.0001	.0001
1987-88	%	89.0%	93.4%	46.6%	62.9%
	N	1,989	1,979	1,989	1,979
	z	14.66	13.23	8.29	15.87
	LS	.0001	.0001	.0001	.0001
1988-89	%	89.9%	93.8%	46.4%	65.4%
	N	2,029	2,026	2,029	2,026
	z	16.05	14.01	8.15	18.41
	LS	.0001	.0001	.0001	.0001

The z test is a comparison of the current year with the base year of 1982-83.

The above table shows an especially meaningful trend over time given the stability of Spencerport's student population.

Data regarding the stability of Spencerport's student population is:

Table 3 - District Demographics

	1983	1984	1985	1986	1987	1988	1989
% Free and Reduced Lunch	4.5	5.2	6.7	5.7	5.2	5.9	5.9
% Minority Students	2.9	3.2	3.2	3.9	4.1	4.4	5.8
% of Mothers without a high school diploma	5.5	7.4	6.7	6.0	6.4	5.9	5.6

The increases between 1983 and 1989 for the proportion of students receiving free and reduced lunches and for the proportions of minority students are statistically significant at the .01 level. The z test for the significance of difference between two proportions was used (Bruning and Kintz, 1968). Most people assume that increases in these proportions are associated with comparable declines in the overall level of student achievement. Instead, there were increases in the overall level of student achievement. Because the Project uses and monitors the proportion of mothers without a high school education as its indicator of socio-economic status (Frederiksen and Edmonds, 1977), we conclude that the socio-economic characteristics of the student population have been stable throughout the life of the Project.

3. As the proportion of students attaining minimum academic mastery increased, so too did the proportions of students attaining scores indicative of academic excellence increase.

First, this is demonstrated in right side of Table 2 above.

Second, significant improvement occurred in the proportions of students taking and passing the Regents examinations. There is a significant difference between Spencerport and comparable school districts in the median percent passing of grade enrollment in six of eleven subjects. Similar positive though not statistically significant trends occurred in three of eleven subjects. (See the charts in Appendix B.)

Table 4 - Math 9: Percent Taking and Percent Passing

		1983	1984	1985	1986	1987	1988	1989
% Taking	Comparable Dist	71	77	54	51	61	65	67
	Spencerport	78	71	71	71	71	90	84
% Passing	Comparable Dist	87	82	84	89	89	83	86
	Spencerport	94	90	91	93	93	83	80

This data does not, however, reflect the interaction of the differing levels of participation and the differing levels of success in the Regents courses. This interaction is reflected by the percent passing of grade enrollment as described above. For example:

Table 5 - Math 9: Percent Passing of Grade Enrollment

		1983	1984	1985	1986	1987	1988	1989
% Taking	Comparable Dist	61.9	63.1	45.3	45.6	54.4	54.0	57.4
	Spencerport	72.2	63.9	64.0	64.5	66.2	75.3	66.9

We asked Wooley if her data supported the relationship between the presence of the correlates and the gains in student achievement. She reported that the interview data shows that teachers connect the improvement of student behavior, attitudes, and performance (due to teachers' higher expectations) to improvement in student's performance in courses and on tests. She also reported that systemic changes (i.e. roles, goals and policies, and processes and procedures) occurred in the schools during the implementation of the project (Wooley, 1991).

Comparability.

A group of five comparable school districts was constituted in order to test the hypothesis that the observed changes in student achievement were a part of an overall increase in student achievement in the region. The districts were compared on the following variables: Percentage of minority pupils, drop-out rate, poverty index, limited English-speaking pupil ratio, median years teaching experience, total expenditures per pupil, and expenditures for instruction. In all variable cases, differences between the comparable districts and Spencerport were less than plus or minus .33 standard deviations.

Table 6 - New York State Regents Examinations
Percent Passing of Grade Enrollment
1983 - 1989

	Mean Rank			Level of Sig.
	Spencerport	Comparable Districts	U	Corrected for Ties
Math 9	11.0	4.0	.0	.0017
Math 10	10.43	4.57	4.0	.0088
Math 11	10.71	4.29	2.0	.0040
Earth Sc	10.07	4.93	6.5	.0213
Biology	9.29	5.71	12.0	.1102
Chemistry	6.07	8.93	14.5	.2008
Physics	10.57	4.43	3.0	.0060
Comprehen.				
English	8.0	7.0	21.0	.6540
Comprehen.				
Soc. Stu.	9.0	6.0	14.0	.1797
French	10.14	4.86	6.0	.0181
Spanish	6.29	8.71	16.0	.2774

* One is low, n is high. A mean rank is the average rank for each group when observations are ranked across both groups. (Bruning and Kintz, p. 276)

Eleven Regents examinations were tracked from 1983 through 1989 in Spencerport and for the five comparable school districts. With percent of all students in the grade passing the test as the metric, Spencerport was compared with the comparable districts by ranking the percent passing for both Spencerport and the comparable districts across the years and then comparing the mean ranks of each group with a Mann-Whitney U test (Bruning and Kintz, p. 276). This procedure results in ranks which range from 4.0 through 10.71. (See the above table.) A significantly high rank indicates that Spencerport out-performed the comparable districts in five out of eleven comparisons.

Educational Significance of Results

The original intent of the More Effective Schools/Teaching Project was to see if the effective schools research could be used to help a good school system become better, as defined by standardized student outcome measures. Statistically significant improvements in student outcomes occurred throughout the district's schools as a result of the Project.

The nation, through the National Goals for Education, and Congress, through the Hawkins-Stafford Act (P. L. 100-297), have established that improvement in student academic achievement must be a priority. The Hawkins-Stafford Act authorized funding effective schools programs with Chapter 1 and Chapter 2 funds in

order to increase student achievement. The statistical significance of the student achievement results show that this intervention is a viable vehicle to meet the National Goals and to implement the Hawkins-Stafford Act.

Spencerport's More Effective Schools/Teaching Project was selected for inclusion in two recent major descriptions of key effective schools projects throughout the nation. In 1990 the United States House of Representatives Committee on Education and Labor published descriptions of nine effective schools programs. They were selected because their programs adhere closely to the definitions laid out in the Federal legislation, i.e. the Hawkins-Stafford Elementary and Secondary School Improvement Amendments of 1988 (Committee, 1990). Also in 1990 the National Center for Effective Schools Research and Development published a book of twelve case studies. They were selected because they "had worked faithfully and consistently over time to implement an evolving Effective Schools model (Taylor, 1990)." In addition, in 1988 the New York State Education Department validated the Project for dissemination throughout the state. (The SED's validation process has been validated by the PEP panel of the National Diffusion Network.) Thus three different, important organizations have recognized that Spencerport's More Effective Schools/Teaching Project can be used to help school systems become better, as measured by standardized student outcome scores, by creating a specific process of assessment, problem solving and development of school improvement plans. The process is driven by the findings of the effective schools research and research on school improvement. Further, the Congressional recognition shows that the Project is directly related to important national needs and goals.

Approach to Validation: The Program Effectiveness Panel.

In the booklet by Ralph and Dwyer (1988), Making the Case, the authors identify four types of claims recognized by the Program Effectiveness Panel. These include:

1. Academic Achievement - Changes in Knowledge and Skills, ("programs claiming to result in greater knowledge or increased learning of skills," p20)
2. Improvements in Teachers' Attitudes and Behaviors, (projects which "seek to improve teaching and learning by influencing teachers' attitudes and changing their behaviors, or both," p25)
3. Improvements in Students' Attitudes and Behaviors, (projects which meet both of the following conditions,

* aimed at the immediate effect of producing changes in the attitudes and behaviors of students; and,
* postulates that the outcomes will contribute to student achievement sometime in the future.
* (Note:) typically, claims of this type are <u>intended to achieve changes in a targeted subgroup rather than in an entire institutionalpopulation.</u>" p31).

4. Improvements in Instructional Practices and Procedures. Projects which meet the following conditions:
    * "aimed at the immediate effect of producing changes in the school, system or institution, and/or changes in a general population or service area,
    * consists of a coherent set of procedures that can be transferred to similar institutions; and
    * postulates that the outcomes will contribute to student achievement some time in the future."

Finally, "<u>PEP is interested only in those claims that are related to student learning (either directly or in intermediate fashion) and not simply in improved functioning of educational institutions</u>" p36.

The authors further state that programs seeking approval of the Panel may submit evidence of claims for two or more of the above types. The key phrase in panel submissions criteria addressed by this paper concerns "attribution."

> "Because PEP evaluates complex programs operating in real schools, clearly attributing results to the program is often the primary challenge for the program evaluator. In other words, it is critical for the program to select an evaluation approach that clearly demonstrates the link between the program elements and observed outcomes." p15.

The discussion of attribution continues by the authors to include the testing of rival hypotheses or "rule(ing) out plausible alternative explanations for the observed results." Even more specifically, the authors indicate, that:

> "An evaluation design which cannot test or control teacher effects, students' maturation, changes in related school policies, or selection differences among program and comparison group participants is rarely convincing."

In a discussion of why projects typically fail to gain Panel approval Cook, Dwyer and Stalford (1991) cite five reasons which focus on the evidence or lack of same of attributable effects. The second of their reasons is the lack of a way to "directly attribute the effects observed to the program." Further, the Panel's approach to program evaluation is described by the authors as being differentiated from other federal programs that "examine programmatic features" by it's "singular focus on measured effects." p4. Of thirteen projects reviewed from Panel submissions which were approved between January and December, 1990, none of the evaluation designs was qualitative.

Earlier study of the predecessor to the Panel, known as the Joint Dissemination Review Panel (JDRP) by Fang and Covert, (1986) concluded that the quality of the evaluation designs for programs was critical in gaining approval from that panel and that the quality of design had improved steadily from the mid 1970's to 1984-85. Improvement here obviously meant the shift from pre-experimental to quasi-experimental and experimental designs (Campbell and Stanley, 1967). Only one project in their study of 232 project submittals (which included 316 designs) was submitted and approved with a qualitative design. p10.

Spencerport's Initial Application.

For the first round of review, during the spring of 1991, Spencerport chose a design for analysis of project data which emphasized learning effects, over time, for Stanford Achievement tests. The model used for this analysis was similar to that successfully used by Johnson City in their ODDM application, which was successful in being approved by the JDRP in 1986. Cohort analysis of six cohorts between the years 1983 and 1989 revealed significant increases in normal curve equivalent scores for all children. Also reported were significant gains in the proportion of children scoring above the fortieth percentile over time, as well as the proportion of children scoring in stanines 7-9, over time. Finally, claiming improvements in instructional practices and procedures, the application presented evidence that teachers perceived significant increases in the numbers of effective schools correlates in place, over time.

There were two problems with the case being made from the Panel's point of view. First, the cohort analysis revealed a marked increase in NCE scores between grade 1 and grade 2, in every cohort over time. This was a curious finding not explained by the analysis, and as such was troubling to some Panel members. Second, the Panel was not convinced that there was a causal link between the described intervention and the documented evidence of performance. The following quotes appeared in the review of the application:

> "What is the program and how does it work on specific outcomes?"
>
> and
>
> "The program is not sufficiently well defined to provide a good model for other schools."
>
> and
>
> "..the system as described is too undefined to replicate easily."

Revisions and Second Submission.

Analysis of reviewers comments from the first submission resulted in a number of changes to the second application. First, since there was no apparent explanation for the magnitude of the initial increase in Stanford scores, the decision was made to remove this analysis from the application. A second analysis of the data produced the results concerning students scoring at or above the fortieth percentile, and students scoring in the stanines 7-9 (see table 2, above) was retained. This data, together with several tables (4 through 6) concerning Regents' data, were added to the text. Second, in an attempt to link process to outcomes, a table

(3) concerning the number of correlates in place over time which corresponded to the gains in achievement was added, along with more specific reference to process data collected by Wooley (1990) for her dissertation. In addition several tables concerning the correlates were added to the section which claimed improvements in instructional practices and procedures. (Tables 7 and 8).

Discussion.

At the date of this writing the second submission is being considered by the panel. Prospects for approval are in doubt because the link between the broad based, multi-dimensional system change and the measures of pupil outcomes are admittedly correlational rather than causal. The specific school action plans which might bear a causal relationship to reading and mathematics gains are not described in the application because of space limitations. The Panel's official guide indicates that written submissions "may not exceed 15 pages." (Ralph and Dwyer, 1988; p5.) The review was based "solely on the weight of the evidence presented to support the claims made for the program" (Tom Shultz to Robert Sudlow, personal communication, May 9, 1991).

Even if the action plans which were developed over a period of several years were described in sufficient detail so as to be convincing to the panel, (there are several volumes of them) it is unlikely that alternative hypotheses of Hawthorne, John Henry, or Rosenthal (Isaac and Michael, 1989) would be ruled out. In fact, one might argue that an accumulation of such effects might be indirectly responsible for higher levels of achievement.

Paradigm problems.

It is the very model for establishing causal links to outcomes which seems at the root of this evaluation problem. The Panel's paradigm for the judgement of a successful innovation is clearly anchored in a "stimulus/response" model of change. Behavioral chains must be established in such models in order to rationalize results which were anticipated. (Lezotte, personal communication, May 23, 1991).

An alternative paradigm is described by Senge (1990):

"The essence of the discipline of systems thinking lies in a shift of the mind:

* seeing interrelationships rather than linear cause-effect chains, and
* seeing processes of change rather than snapshots" p73.

Senge (1990) postulates that the improvement of human systems (quality, cost containment, satisfaction) is a dynamic problem, requiring the mapping of inter-relationships and the manipulation of variables simultaneously. If this is true, it seems logical that the study of cause and effect chains will yield only a partial answer to the improvement problem.

Stalking the "Fifth Claim".

The Program Effectiveness Panel currently recognizes four claims of effectiveness (see above). Each claim depends upon the presentation of evidence which directly support it. While the discussion of guidelines clearly recognized the problem that "the elegance of the famous Campbell and Stanley approach to evaluation design was not tempered by the difficulties of measuring educational impact in working classrooms and schools.," the alternative to these designs remained unclear. A brief discussion of "Qualitative Methodology" admits that case study methodology..."makes the effort to meet PEP's standards a difficult challenge." The discussion concludes with somewhat cryptic advice to developers to read a brief publication by former JDRP chair, Lois-ellen Datta, Case Study Evaluations, (April, 1987). Few if any developers have apparently taken this advice (Cook, Dwyer and Stalford, 1991).

In 1982, Carl Clauset completed a dissertation titled: Effective Schooling: A System Dynamics Policy Study. The implications of this study for program evaluation were based in a systems view of organizational change developed years earlier by Jay Forester at MIT (Clauset, 1982; p.12). Clauset described a theoretical model of how schools could move from a state of ineffectiveness to effectiveness. The description of a complex causal loop diagram on page 52 of the dissertation identifies several variables such as grade level standards, perceived success, initial achievement gap, principal interventions, reading achievement, and teacher interventions. Later, by using several simultaneous equations, Clauset was able to demonstrate how theoretical changes in one variable interacted with several changes in other variables (pp 141-148).

In his recommendations for continued research, Clauset (op.cit., p. 149) called for empirical work which might use the dynamic model he developed as a kind of template to study the processes involved with the interaction between system status variables and interventions. If clear specifications for empirical validation of the inter-relationships present in long-term processes associated with school change efforts were developed, would these constitute the specifications for "Claim Type 5: Improvements in Organizational Culture, Policies and Long Term Outcomes?" We think they might.

Modern, important ideas for improving the learning of all children call for changing the culture and/or the climate of the school. Typical examples of this are found in the works of Deal and Peterson (1990), Sizer (1991) Barth (1991), Edmonds, (1982), Lezotte and Bancroft (1985) and Levine and Lezotte, (1990). To ignore these ideas is to ignore much of the underlying knowledge base for current attempts at restructuring schools.

Epilogue.

On April 7, 1992, the Panel reportedly approved the Spencerport application for The More Effective Schools/Teaching Project. The case for claims cited earlier was apparently sufficient for the Panel during this round of reviews. The need for broader, system wide cultural and structural intervention validation remains.

REFERENCES

Barth, R. (1991). Improving Schools from Within. San Francisco, CA: Jossey-Bass Publishers.

Brookover, W. B.,and L. W. Lezotte. (1977). "Changes in School Characteristics Coincident with Changes in Student Achievement." East Lansing: Michigan State University, College of Urban Development.

Brookover, W. B. and Schneider, J. (1975) "Academic environments and elementary school achievement." Journal of research and development in education, 9(1)82-91.

Bruning, James L. and B. L. Kintz. Computational handbook of statistics. Glenview, IL: Scott, Foresman and Company, 1968.

Campbell, D. and Stanley, J. (1966). Experimental and quasi-experimental designs for research. Chicago, IL: Rand McNally.

Clauset, Karl L. (1982) Effective schooling: A system dynamics policy study. Unpublished doctoral dissertation. Boston University.

Comer, J. (1988) "Educating poor minority children." Scientific American. 259(5):42-48.

Committee on Education and Labor, U. S. House of Representatives. (1990). "Improving Education: School Districts Implementing the Effective Schools Model." Washington, D. C.: U. S. Government Printing Office.

Cook, N. and Dwyer, C. and Stalford, C. (1991). "Evaluation and validation: A look at the program effectiveness panel." ERIC document. ED 333 045.

Deal, T. and Peterson, K. (1990) The Principal's Role in Shaping School Culture. Washington, DC: U.S. Government Printing Office.

Datta, L. (1987) "Case study evaluations." Washington, DC: General Accounting Office.

Eubanks, E. and Levine, D. (1983). "A first look at effective schools project in New York City and Milwaukee." Phi Delta Kappan, 64(10): 697-702.

Fang, W. and Covert, R. (1986) "Assess a federal approach to evaluating evaluations: The Joint Dissemination Review Panel, Can approval submissions be distinguished from those not approved?" Paper delivered at the annual meeting of the American Educational Research Association, San Francisco, CA, April.

Gauthier, W. (1982) "Connecticut perspectives on instructionally effective schools." Paper delivered at the annual meeting of the American Educational Research Association, New York, March.

_____. and Pecheone, R. and Shoemaker, J. (1985) "Schools can be more effective." Journal of negro education, 54(3):388-408.

Edmonds, R. (1979). "Effective schools for the urban poor." Educational Leadership. 22 (October): 22-23

_____, and Frederickson, J. (1979) Search for effective schools: The identification and analysis of city schools that are instructionally effective for poor children. (ED 179 396). /A.

Frederick, J. and Clauset, K. (1985) "A comparison of the major algorithms for measuring school effectiveness." Paper delivered at the annual meeting of the American Educational Research Association, Chicago, April.

Holcomb, E. ed. (1991). A Handbook for Implementing School Improvement. Madison, WI: National Center for Effective Schools Research and Development.

Miles, M. and Kaufman, T. (1989) "A Directory of Programs". In, Reaching for excellence: An effective schools sourcebook, Regina Kyle, Ed. Washington, DC: U.S. Government Printing Office.

Mortimore, P. et.al. (1988). School Matters. Berkeley, CA: University of California Press.

Herriot, R. and Gross, N. (1979). The Dynamics of Planned Educational Change. Berkeley, CA: McCutchan Publishing Co.

Isaac, S. and Michael, W. (1989) Handbook in Research and Evaluation. San Diego, CA: EDITS.

Lezotte, L. & Levine, D. (1990) Unusually Effective Schools: A Review and Analysis of Research and Practice. Madison, WI: National Center for Effective Schools Research and Development.

Lezotte, L. & Taylor, B. (1990). Case studies in Effective Schools Research. Madison, WI: National Center for Effective Schools Research and Development.

Lezotte, Lawrence W. Letter to Robert Sudlow, December 2, 1987.

_____. Letter to Robert Sudlow, May 23, 1991.

Lynch, K. (1987) "The size of educational effects: An analysis of programs reviewed by the Joint Dissemination Review Panel." Educational Evaluation and Policy Analysis. 9(1): 66-62.

New York State Education Department. "Comprehensive Assessment Report (A Resource Document): New York State Regents Examinations: District and Building Summaries." Albany, NY: New York State Education Department,1990.

Ralph, J. & Dwyer, C. (1988). Making the Case. Washington, DC: U.S. Department of Education, Office of educational Research and Improvement.

Sarason, S. (1982) The Culture of the School and the Problem of Change. Boston, MA: Allyn and Bacon.

Senge, P. (1990) The Fifth Discipline. New York: Doubleday.

Sizer, T. (1991). Horace's School: Redesigning the American High School. Boston, MA: Houghton Mifflin Co.

Shoemaker, J. (1982) "Effective schools: Putting the research to the ultimate test." Pre-Post Press, 7(2):1.

Stedman, L (1987) "It's time we changed the effective schools formula." Phi Delta Kappan. 69(3):215-224.

Stringfield, S. and Teddlie, C. (1987). "A time to summarize: Six years and three phases of the Louisiana school effectiveness study." Paper delivered at the annual meeting of the American Educational Research Association, Washington, D.C.: April.

Stringfield, S. and Teddlie, C. and Suarez, S. (1986) "Classroom interaction in effective and ineffective schools: Preliminary results form phase III of the Louisiana school effectiveness study." Journal of Classroom Interaction, 20(2)31:37.

Sudlow, Robert E. Master Plan: More Effective Schools/Teaching Project: Report of Leadership Planning Team to the Superintendent of Schools. Spencerport, N.Y.: Spencerport Central Schools, 1983, ERIC # ED 273 025.

_____. Third Annual Report. Spencerport, N.Y.: Spencerport Central Schools, 1986, ERIC # ED 292 093.

_____. What Is An Effective School? Spencerport, N.Y.: Spencerport Central Schools, 1985, ERIC # ED 273 031.

Taylor, Barbara O. (1991). Case Studies in Effective Schools Research. Dubuque, IA: Kendall/Hunt Publishing Company.

U.S. Department of Education. (1988) "Program effectiveness panel: Questions and answers." Washington, DC: Office of Educational Research and Improvement.

Villanova, R. M. (1984) A comparison of interview and questionnaire techniques used in the Connecticut school effectiveness project. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Weiss, A. (1984) The effectiveness of project RISE in raising achievement levels of pupils in Milwaukee Public Schools inner city schools. Unpublished Ph.D. Dissertation, Marquette University, Milwaukee, WI.

Wooley, S. (1990). A case study of teachers' reactions to their school districts effective schools project. Unpublished doctoral dissertation. Syracuse University.